

Patent Claims:

1       1. Apparatus for the stabilization of the engine inlet flow in  
2           engine static tests, that is used for the improvement of  
3           the engine inlet flow at the inlet of an engine inlet or  
4           intake (1) in engine static tests, consisting of an  
5           air-permeable element (4) which, in an end position, is  
6           arranged situated near an engine housing (2) and partially  
7           enclosing the latter, characterized in that the  
8           air-permeable element (4) is formed with a first  
9           air-permeable embodied planar element part (6), which is  
10          arranged under the engine housing (2), which is positioned  
11          along a horizontal engine housing axis (8) and parallel to  
12          a planar ground (7) in the vertical spacing distance (a),  
13          on the surfacial rim side on the longitudinal edges of  
14          which, the longitudinal edges being situated along the  
15          engine housing axis (8), there are arranged, laterally  
16          downstream of the longitudinal edges, further air-permeable  
17          embodied planar element parts (9 to 12), that are embodied  
18          tiltable or foldable out of an existing horizontal  
19          orientation to the engine housing (2).

1       2. Apparatus according to claim 1, characterized in that a  
2           second element part (9) and a third element part (10) are  
3           rotatably movably supported and mechanically secured on the  
4           longitudinal edge side to the first element part (6) on a  
5           first longitudinal edge and on a second longitudinal edge  
6           respectively.

1       3. Apparatus according to claim 2, characterized in that a  
2       fourth element part (11) is arranged situated next to the  
3       second element part (9) on a third longitudinal edge of the  
4       latter, and a fifth element part (12) is arranged situated  
5       next to the third element part (10) on a fourth  
6       longitudinal edge of the latter, which are rotatably  
7       movably supported and mechanically secured on the  
8       longitudinal edge side.

1       4. Apparatus according to claim 1, characterized in that the  
2       air-permeable element (4), which is integrated of the first  
3       element part (6) and the further element parts (9 to 12),  
4       is initially set onto a planar configured ground (7) (in  
5       horizontal orientation), to which a lifting and folding  
6       unit is positioned below the ground overlay, which is  
7       installed ground-sunken, with the lifting mechanism of  
8       which the horizontally situated element parts (4, 9 to 12)  
9       can be vertically lifted to an intermediate position (4a)  
10      located at a vertical spacing distance (a), which position  
11      is located below the engine housing (2) and situated near  
12      the latter, of which the ground-contacting horizontal  
13      orientation is maintained unchanged.

1       5. Apparatus according to claim 4, characterized in that a  
2       ground region is cut or recessed out of the ground (7), to  
3       which a ground boundary (5) is bordered or framed in on the  
4       ground rim side of the recess, which ground boundary is

5           fitted or adapted to the integrated (from several element  
6       parts 6, 9 to 12) form of the air-permeable element (4),  
7       within which the air-permeable element (4) is arranged in  
8       a planar manner, of which the non-ground-contacting surface  
9       region is arranged flush with a ground-opposite side region  
10      (14) of the ground boundary (5) or approximately flush at  
11      least with the ground-surface of the ground (7).

1       6. Apparatus according to the claims 1 and 4, characterized in  
2       that a folding mechanism is integrated in the lifting and  
3       folding unit, with which folding mechanism the further  
4       element parts (9 to 12), which are embodied to be foldable  
5       facing toward the first element part (6), can be moved out  
6       of the intermediate position (4a) therefrom into an end  
7       setting, which is corresponding to various different end  
8       positions of the air-permeable element (4), preferably an  
9       end position of the air-permeable element (4) located near  
10      the engine housing (2).

1       7. Apparatus according to claim 6, characterized in that the  
2       end setting of the individual further element parts (9 to  
3       12) is different, to the extent that a) the second and the  
4       third element part (9, 10) is angled onto the first element  
5       part (6) on the edge rim side and the second and the fourth  
6       element part (9, 11) as well as the third and the fifth  
7       element part (10, 12) are arranged lying next to one  
8       another and not angled relative to one another as well as  
9       aligned flush in a straight line, whereby these flush

10 aligned element parts (9 to 12) can be moved out of the  
11 intermediate position (4a) into a second end setting (4b)  
12 with the folding mechanism of the lifting and folding unit,  
13 or b) the second and the third element part (9, 10) is  
14 angled onto the first element part (6) on the edge rim side  
15 and the fourth element part (11) is angled away from the  
16 second element part (9) as well as the fifth element part  
17 (12) angled away from the third element part (10), to such  
18 an extent that the fourth and the fifth element part (11,  
19 12) is arranged perpendicularly to the first element part  
20 (6), whereby the third and fourth element part (10, 11) can  
21 be moved out of a position corresponding to the second end  
22 setting (4a) into a third end setting (4c) with the folding  
23 mechanism of the lifting and folding unit, c) none of the  
24 element parts (9 to 12) is angled onto the first element  
25 part (6) so that the intermediate position (4a)  
26 corresponding to the horizontal arrangement of all element  
27 parts (6, 9 to 12) coincides with a first end setting.

1 8. Apparatus according to the claims 4 and 6, characterized in  
2 that, a vertical lifting of all element parts (6, 9 to 12)  
3 of the air-permeable element (4) is realized with the  
4 lifting mechanism, and additionally the folding of the  
5 further element parts (9 to 12) is realized with the  
6 folding mechanism during the lifting process.

1 9. Apparatus according to claim 1, characterized in that the  
2 first element part (6) is embodied parallelepiped or cube

3           shaped, of which the base and top surface is configured  
4           square or rectangular shaped.

1       10. Apparatus according to claim 1, characterized in that the  
2           further element parts (9 to 12) are embodied variously,  
3           preferably parallelepiped or cube shaped, or uniformly only  
4           square or cube shaped, of which the base or top surface is  
5           configured square or rectangular shaped.

1       11. Apparatus according to claim 10, characterized in that the  
2           first element part (6) and the further element parts (9 to  
3           12) are embodied uniformly long along the engine housing  
4           axis (8).

1       12. Apparatus according to claim 7, characterized in that the  
2           length of the fourth and of the fifth perpendicularly  
3           arranged element part (11, 12) is embodied with different  
4           length as considered relative to one another.

1       13. Apparatus according to the claims 4 and 5, characterized in  
2           that a taxiway covering (13) is applied onto the surface of  
3           the ground (7), from which taxiway covering a covering  
4           region that is arranged congruent to the recessed ground  
5           region is cut out or recessed, which is adapted or fitted  
6           to the integrated (of several element parts 6, 9 to 12)  
7           form of the air-permeable element (4), which is arranged  
8           with the non-ground-contacting surface substantially  
9           flushly with the surface of the taxiway covering (13).

1       14. Apparatus according to the claims 5 and 13, characterized  
2       in that the first element part (6) and the further element  
3       parts (9 to 12) of the air-permeable element (4) that is  
4       ground-contacting or arranged within the ground boundary  
5       (5) is embodied in such a manner that it is able to be  
6       rolled over and capable of being rolled over by a land  
7       vehicle or a ground-contacting air vehicle, without being  
8       damaged.

1       15. Apparatus according to claim 14, characterized in that the  
2       material of the element parts (6, 9 to 12) is embodied  
3       pressure and weather resistant as well as substantially  
4       light in weight.

1       16. Apparatus according to claim 15, characterized in that the  
2       material is metallic or synthetic plastic-like or a  
3       material consisting of both components.

1       17. Apparatus according to claim 16, characterized in that the  
2       material is a synthetic plastic that is filled with metal  
3       particles or other substances suitable for the purpose,  
4       which are useful to the material strength.

1       18. Apparatus according to the claims 14 to 16, characterized  
2       in that the element parts (6, 9 to 12) are constructed of  
3       a metal core, a synthetic plastic surrounding the latter,  
4       which is synthetic plastic coats at least the metal core.